

# इंटरनेट

# मानक

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IS 10676 (1983): Spatula, Brain, Double-ended Malleable, Olivecrona's Pattern [MHD 7: Neurosurgery Instruments Implants and Accessories]



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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

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“Knowledge is such a treasure which cannot be stolen”



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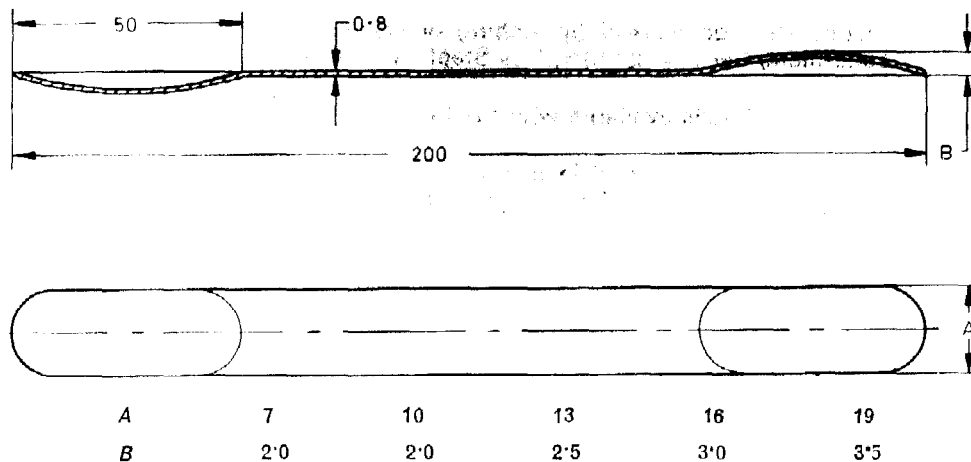
Indian Standard

# SPECIFICATION FOR SPATULA, BRAIN, DOUBLE-ENDED, MALLEABLE, OLIVECRONA'S PATTERN

**1. Scope** — Material, dimensional and other requirements for five sizes of malleable brain spatula used in neurosurgery.

**2. Material** — Stainless steel sheet conforming to Designation 04Cr18Ni10 or 07Cr18Ni9 of IS : 6911-1972 'Specification for stainless steel plate, sheet and strip'.

**3. Shape and Dimensions** — As shown in Fig. 1.



All dimensions in millimetres.

FIG. 1 SPATULA, BRAIN, DOUBLE-ENDED, MALLEABLE, OLIVECRONA'S PATTERN

**3.1 Tolerances on various dimensions shall be permitted as given below:**

- $\pm 0.1$  mm on dimensions up to 2.0 mm;
- $\pm 0.2$  mm on dimensions above 2.0 mm and up to 5.0 mm;
- $\pm 1.0$  mm on dimensions above 5.0 mm and up to 20.0 mm;
- $\pm 1.5$  mm on dimensions above 20.0 mm and up to 50.0 mm; and
- $\pm 2.0$  mm on dimensions above 50.0 mm.

## 4. Workmanship and Finish

**4.1** The spatula shall be of one piece and shall be free from burrs, pits, cracks and other surface defects.

**4.2** All the edges of the spatula shall be rounded and shall be nowhere sharp.

**4.3** The spatula shall be treated by a suitable passivation process, in 10 percent (v/v) nitric acid solution for not less than 30 minutes at a temperature of not less than 10°C and not exceeding 60°C. The spatula shall then be rinsed in water and dried in hot air.

**4.4** The spatula shall have dull finish.

## 5. Tests

**5.1 Corrosion Resistance** — Scrub the spatula with soap and warm water, rinse thoroughly in hot water and then dip in 95 percent ethyl alcohol. Dry the spatula, clean and immerse it in copper sulphate

solution at room temperature for 6 minutes and wash off with distilled water or wet cotton wool. The solution shall be made as follows:

Copper sulphate ( $\text{CuSO}_4 \cdot 5 \text{H}_2\text{O}$ )	4.0 g
Sulphuric acid ( $\text{H}_2\text{SO}_4$ sp.gr 1.84 g/ml )	10.0 g
Distilled water [ see IS : 1070-1977 Specification for water for general laboratory use ( <i>second revision</i> ) ]	90.0 ml

No red stains or spots on spatula shall be allowed.

**5.2 Performance Test** — The spatula shall be subjected to reverse bend test in accordance with IS : 1403-1977 'Method for reverse bend test for steel sheet and strip less than 3 mm thick ( *first revision* )'. The spatula shall withstand 30 number of reverse bends (NB), when the test is carried out over two mandrels with radius of curvature as 2.5 mm each.

**6. Marking** — Each spatula shall be marked by etching or stamping with the manufacturer's name, initials or recognized trade-mark, the words 'Stainless Steel' and the country of manufacture.

**6.1 ISI Certification Marking** — Details available with the Indian Standards Institution.

**7. Packing** — The spatula shall be wrapped in a moisture proof paper and packed in a polyethylene cover. Alternatively, the spatula may be packed as agreed to between the purchaser and the supplier.